

# Skeleton Loader

The <aava-skeleton> component is a versatile loading placeholder that provides smooth animations and multiple shape options to create engaging loading states. It helps improve perceived performance by showing users that content is loading, reducing perceived wait times and providing visual feedback during data fetching operations.

## How to use

### Basic Usage

A simple skeleton with default rectangle shape and wave animation.

```
import { AavaSkeletonComponent } from "@aava/play-core";
```

### Shapes

The skeleton component supports multiple shapes for different content types.

```
&lt;!-- Default skeleton for text content --&gt;  
&lt;aava-skeleton  
  width="100%"  
  height="20px"  
  shape="rectangle"  
  animation="wave"  
&gt;&lt;/aava-skeleton&gt;  
  
&lt;!-- Shorter text line --&gt;  
&lt;aava-skeleton  
  width="80%"  
  height="16px"  
  shape="rectangle"  
  animation="wave"  
&gt;&lt;/aava-skeleton&gt;  
  
&lt;!-- Even shorter text line --&gt;  
&lt;aava-skeleton  
  width="60%"  
  height="16px"  
  shape="rectangle"  
  animation="wave"  
&gt;&lt;/aava-skeleton&gt;
```

### Custom Styling

Customize the skeleton with different colors, sizes, and background colors.

```
&lt;!-- Rectangle --&gt;  
&lt;aava-skeleton  
width="200px"  
height="20px"  
shape="rectangle"  
animation="wave"  
&gt;&lt;/aava-skeleton&gt;  
  
&lt;!-- Circle --&gt;  
&lt;aava-skeleton  
width="80px"  
height="80px"  
shape="circle"  
animation="pulse"  
&gt;&lt;/aava-skeleton&gt;  
  
&lt;!-- Rounded --&gt;  
&lt;aava-skeleton  
width="150px"  
height="100px"  
shape="rounded"  
animation="wave"  
&gt;&lt;/aava-skeleton&gt;  
  
&lt;!-- Square --&gt;  
&lt;aava-skeleton  
width="100px"  
height="100px"  
shape="square"  
animation="wave"  
&gt;&lt;/aava-skeleton&gt;
```

## Card Skeleton

Create a complete card skeleton with multiple elements.

```
&lt;!-- Light blue background --&gt;  
&lt;aava-skeleton  
    width="200px"  
    height="20px"  
    shape="rectangle"  
    animation="wave"  
    backgroundColor="#e3f2fd"  
&gt;  
&lt;/aava-skeleton&gt;  
  
&lt;!-- Light purple background --&gt;  
&lt;aava-skeleton  
    width="200px"  
    height="20px"  
    shape="rectangle"  
    animation="pulse"  
    backgroundColor="#f3e5f5"  
&gt;  
&lt;/aava-skeleton&gt;  
  
&lt;!-- Light green circle --&gt;  
&lt;aava-skeleton  
    width="80px"  
    height="80px"  
    shape="circle"  
    animation="wave"  
    backgroundColor="#e8f5e8"  
&gt;  
&lt;/aava-skeleton&gt;  
  
&lt;!-- Light orange rounded --&gt;  
&lt;aava-skeleton  
    width="150px"  
    height="100px"  
    shape="rounded"  
    animation="pulse"  
    backgroundColor="#fff3e0"  
&gt;  
&lt;/aava-skeleton&gt;
```

## List Skeleton

Build list skeletons for data tables and content lists.

```
&lt;div  
  *ngFor="let element of cardSkeletonElements; let i = index"  
  class="skeleton-element"  
  [class.title]="i === 1"  
  [class.description]="i > 1"  
&gt;  
  &lt;aava-skeleton  
    [width]="element.width"  
    [height]="element.height"  
    [shape]="element.shape"  
    [animation]="element.animation"  
  &gt;&lt;/aava-skeleton&gt;  
&lt;/div&gt;
```

## Features

### Multiple Shapes

- Rectangle : Default shape for text lines and content blocks
- Circle : Perfect for avatars and profile pictures
- Rounded : Soft corners for modern UI elements
- Square : Sharp corners for structured content

### Animation Types

- Wave : Smooth shimmer effect that moves across the skeleton
- Pulse : Gentle fade in/out effect for subtle loading states

### Customization

- Flexible Sizing : Custom width and height for any content type
- Color Control : Customizable background and animation colors
- Responsive Design : Adapts to different screen sizes
- Performance Optimized : Lightweight animations with minimal impact

### Accessibility

- Screen Reader Support : Proper ARIA attributes for loading states
- Reduced Motion : Respects user's motion preferences
- High Contrast : Works with high contrast mode settings
- Focus Management : Proper focus handling during loading

### API Reference

# Inputs

Property	Type	Default	Description
width	string	'100%'	Width of the skeleton element
height	string	'20px'	Height of the skeleton element
shape	ShimmerShape	'rectangle'	Shape of the skeleton element
animation	ShimmerAnimation	'wave'	Animation type for the skeleton
backgroundColor	string	'#e0e0e0'	Background color of the skeleton
skeletonType	'tableList'   'table'	'tableList'	Type of skeleton layout
rows	number	5	Number of rows in the skeleton layout
columns	number	5	Number of columns in the skeleton layout
isLoading	boolean	true	Whether to show the skeleton

# Types

## ShimmerShape

## ShimmerAnimation

## CSS Classes

The component provides several CSS classes for styling:

Class Name	Description
.shimmer-container	Main skeleton container
.shimmer-item	Base skeleton element
.shimmer-rectangle	Rectangle shape styling
.shimmer-circle	Circle shape styling
.shimmer-rounded	Rounded shape styling
.shimmer-square	Square shape styling
.shimmer-animation-wave	Wave animation styling
.shimmer-animation-pulse	Pulse animation styling

## CSS Custom Properties

The component uses CSS custom properties for theming:

Property	Description
--skeleton-border-radius	Border radius for rectangle shape
--skeleton-rounded-radius	Border radius for rounded shape
--skeleton-wave-duration	Duration of wave animation
--skeleton-pulse-duration	Duration of pulse animation
--skeleton-wave-opacity	Opacity for wave animation
--skeleton-pulse-opacity	Opacity for pulse animation
--skeleton-background-color	Background color of skeleton
--skeleton-gradient-color-start	Start color for gradient animation
--skeleton-gradient-color-end	End color for gradient animation
--skeleton-animation-timing	Timing function for skeleton animations
--skeleton-animation-easing	Easing function for skeleton transitions

## Best Practices

# **Content Matching**

- Match Content Size : Make skeleton dimensions match the actual content
- Use Appropriate Shapes : Choose shapes that represent the actual content
- Maintain Layout : Keep skeleton layout consistent with loaded content
- Consider Spacing : Include proper spacing between skeleton elements

# **Performance**

- Limit Skeleton Count : Don't show too many skeletons at once
- Use Appropriate Duration : Keep animations smooth but not distracting
- Consider Motion Preferences : Respect user's motion preferences
- Optimize for Mobile : Ensure good performance on mobile devices

# **User Experience**

- Show Loading State : Always indicate when content is loading
- Provide Context : Use skeletons that give users an idea of what's coming
- Smooth Transitions : Ensure smooth transition from skeleton to content
- Consistent Timing : Keep skeleton duration consistent across the app

# **Accessibility**

- Screen Reader Support : Provide proper loading announcements
- Reduced Motion : Support users who prefer reduced motion
- High Contrast : Ensure visibility in high contrast mode
- Focus Management : Handle focus properly during loading states

# **Accessibility Guidelines**

## **Screen Reader Support**

- Loading Announcements : Provide clear loading state announcements
- Content Description : Describe what content is loading
- Progress Indication : Indicate loading progress when possible
- State Changes : Announce when content finishes loading

# **Motion and Animation**

- Reduced Motion : Respect prefers-reduced-motion media query
- Animation Duration : Keep animations smooth but not distracting

- Motion Alternatives : Provide alternatives for users who can't see animations
- Performance : Ensure animations don't cause performance issues

## Visual Design

- High Contrast : Ensure visibility in high contrast mode
- Color Independence : Don't rely solely on color for information
- Focus Indicators : Provide clear focus indicators
- Consistent Styling : Maintain consistent skeleton styling

## Keyboard Navigation

- Focus Management : Handle focus properly during loading
- Tab Order : Maintain logical tab order
- Skip Links : Provide skip links for keyboard users
- Loading States : Indicate loading state to keyboard users

## Responsive Behavior

## Mobile Adaptations

The skeleton component automatically adapts to mobile screens:

- Touch Optimization : Optimized for touch interactions
- Viewport Adaptation : Adapts to different mobile viewport sizes
- Performance : Optimized performance for mobile devices
- Battery Consideration : Efficient animations for battery life

## Breakpoint Behavior

- Desktop (>768px) : Full skeleton with all features
- Mobile ( $\leq 768px$ ) : Optimized skeleton for mobile screens
- Content Scaling : Skeleton scales appropriately with content
- Animation Performance : Optimized animations for different devices

## Content Considerations

- Flexible Sizing : Skeleton adapts to different content sizes
- Layout Preservation : Maintains layout consistency across devices
- Loading States : Consistent loading experience across platforms
- Performance : Efficient rendering on all device types